

**APPARATUS AND METHODS FOR PROCESSING COMPOSITE COMPONENTS  
USING AN ELASTOMERIC CAUL**

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**ABSTRACT OF THE DISCLOSURE**

Apparatus and methods for processing composite components using an elastomeric  
caul are disclosed. In one embodiment, a method includes forming a prepreg material on a  
10 non-planar portion of a lay-up mandrel, and providing an elastomeric caul over the prepreg  
material in an initial position such that a first portion of the elastomeric caul is proximate the  
prepreg material on the lay-up mandrel, and a second portion of the elastomeric caul adjacent  
the first portion is spaced apart from the prepreg material. Next, a pressure is reduced within  
a space disposed between the elastomeric caul and the lay-up mandrel proximate the non-  
15 planar portion. Simultaneously with the reducing of the pressure with the space, the  
elastomeric caul is stretched into a second position such that the second portion of the  
elastomeric caul is drawn proximate to at least one of the prepreg material and the lay-up  
mandrel.

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BLACK LOWE & GRAHAM <sup>PLLC</sup>



701 Fifth Avenue, Suite 4800  
Seattle, Washington 98104  
206.381.3300 • F: 206.381.3301